

WATERKEEPER ALLIANCE V. EPA: A DEMONSTRATION IN REGULATING THE REGULATORS

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I. INTRODUCTION

Factory farms, also known as contained animal feeding operations (CAFOs), are known for noxious odors, mass production of livestock, and their potential to devastate aquatic life as well as compromise the integrity of nearby water bodies. CAFOs can also significantly reduce neighboring property values.¹ CAFOs are big businesses² that are getting bigger and generating billions of dollars in revenue each year. The days of the family farm are waning, and the corporate animal production

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1. Richard C. Ready & Charles W. Abdalla, *The Amenity and Disamenity Impacts of Agriculture: Estimates From Hedonic Pricing Model*, AM. J. AGRIC. ECON., May 1, 2005 at 314. “Single animal production facility decreases nearby property values by up to 6.4%.” *Id.*

2. In 2003, the CAFO dominated livestock industry generated approximately \$98.3 billion. National Cattlemen’s Beef Association, Industry statistics, *available at* [http://www.beefusa.org/uDocs/Beef_Industry_Facts_\(12.16.04\).doc](http://www.beefusa.org/uDocs/Beef_Industry_Facts_(12.16.04).doc) (last visited October 12, 2005).

“generate[d] billions of dollars in revenue a year.”⁷⁷ For example, the poultry production industry exceeded \$21.6 billion dollars in 1997; CAFOs producing over one hundred thousand birds generated much of this revenue.⁷⁸ In 2003, the CAFO dominated livestock industry generated approximately \$98.3 billion.⁷⁹

C. CAFOs ARE A PROBLEM

Manure produced by livestock contain, *inter alia*,

(1) nutrients such as nitrogen and phosphorus; (2) organic matter; (3) solids, including the manure itself and other elements mixed with it such as spilled feed, bedding and litter materials, hair, feathers and animal corpses; (4) pathogens (disease-causing organisms such as bacteria and viruses); (5) salts; (6) trace elements such as arsenic; (7) odorous/volatile compounds such as carbon dioxide, methane, hydrogen sulfide, and ammonia; (8) antibiotics; and (9) pesticides and hormones.⁸⁰

There are more than one hundred and fifty pathogens in livestock manure “including the six human pathogens that account for more than ninety percent of food and water borne diseases in humans.”⁸¹ Potential for transmission of these deadly pathogens is an important concern because of the “relatively low infectious dose in humans.”⁸² Furthermore, the use of antibiotics on the animals could potentially generate strains of pathogens that are resistant to antibiotics.⁸³ Some other studies have detected, *inter alia*,

[A]ntibiotic resistant bacterial beneath swine farms; *E. coli* and fecal *Streptococci* in ground water near hog lagoons; unsafe quantities of fecal coliform in surface waters adjacent to CAFOs; the Utah Department of Environmental Quality detected bacteria in Utah surface waters from cattle feedlots; and USGS found antibiotics in 16 of 31 Iowa stream samples.⁸⁴

Furthermore, EPA analysis indicated that nineteen states reported four million fish have been killed as a result of “both runoff and spills at CAFOs.”⁸⁵ These deaths

Facility: Changing environmental Liability to Fit the Changing Structure of Livestock Production, 93 CAL. L.R. 797 (2005).

77. *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486, 493 (2d Cir. 2005) (citing Environmental Protection Agency, *Development Document for the final revisions to the National Pollutant Discharge Elimination System Regulations and the Effluent Guidelines for the Concentrated Animal Feeding Operations*, at 4-45 (Dec. 2002)).

78. *Waterkeeper*, 399 F.3d at 493 n.9 (citing Environmental Protection Agency, *Development Document for the final revisions to the National Pollutant Discharge Elimination System Regulations and the Effluent Guidelines for the Concentrated Animal Feeding Operations*, 4-45 (Dec. 2002)).

79. National Cattlemen’s Beef Association, Industry statistics, available at [http://www.beefusa.org/uDocs/Beef_Industry_Facts_\(12.16.04\).doc](http://www.beefusa.org/uDocs/Beef_Industry_Facts_(12.16.04).doc) (last visited October, 13, 2005).

80. *Waterkeeper*, 399 F.3d at 494 (citing Effluent Limitations Guidelines II, *supra* note 18, at 2976-79).

81. Effluent Limitation Guidelines I, *supra* note 14, at 7236.

82. *Id.*

83. *Id.* at 7236 (widespread use of antibiotics may be contributing to the emergence of more strains of antibiotic-resistant pathogens).

84. Environmental Brief, *supra* note 3, at 15 (citing Environmental Defense Comments, at 4-5 (July 30, 2001)).

85. Effluent Limitation Guidelines I, *supra* note 14, at 7238.

can be attributed to eutrophication⁸⁶ and a myriad of other adverse impacts that manure runoff has on surface water.⁸⁷ Human health concerns about the multitude of negative impacts the manure from AFO/CAFOs can have on drinking waters include spontaneous abortions, methemoglobinemia⁸⁸ in infants, and an increase in stomach and esophageal cancers.⁸⁹ The noxious vapors emanating from CAFOs are also a source of green house gases.⁹⁰

D. INTRODUCTION OF MANURE INTO OUR WATER SUPPLY

Harmful pollutants from manure produced by CAFOs enter our environment in many ways and forms and impact not only our environment, but also our health. For example, CAFOs often store liquefied manure in large lagoons or storage ponds⁹¹ which commonly leak and contaminate shallow ground water.⁹² Surveys taken of thirty-six lagoons in the Carolinas showed that almost two-thirds of them had leaked pollutants into ground water.⁹³ Furthermore, an Iowa State University study declared that each and every lagoon should be expected to leak waste at sometime.⁹⁴ Other concerns pertaining to the lagoons are the potential for the storage units to overflow and spill raw waste.⁹⁵ Volatilization, a change of the liquid waste into a vapor,⁹⁶ is another way that these pollutants can be distributed through the air and subsequently reach our nation's water supply.⁹⁷

The most common way that raw waste reaches our nation's waterways is through overapplication or improper application of the waste to the land.⁹⁸ Land application is a technique applied by CAFOs to dispose of an estimated ninety

86. Eutrophication is the depletion of oxygen in water. "Eutrophication is the most documented impact of nutrient pollution and is a serious concern for coastal and estuarine resources." *Id.* at 7238.

87. *Id.* (listing negative impacts that surface water has on surface waters such as: algae bloom; pathogens; outbreaks of shellfish poisoning and various others).

88. Methemoglobinemia is a blood disorder activated when nitrite interacts with the hemoglobin in red blood cells. It is commonly referred to as Blue-baby syndrome, because of the blue color that the lips and extremities of the infant takes on as a symptom of this disease. Outcome can be impeded breathing and death. Tom Meersman, *Unsafe Water Found in 66 wells Private Wells in Dakota County Were Tested*, STAR TRIB.(Twin Cities, MN), May 10, 2005, at 1B.

89. Effluent Limitation Guidelines I, *supra* note 14, at 7238.

90. *Id.*

91. Lagoons and storage ponds are typically open-air and often unlined storage facilities constructed to hold the liquefied waste of livestock. These lagoons can store as much as "20 to 45 million gallons of wastewater and can be 6 to 7.5 acres in size." Environmental Brief, *supra* note 3, at 9 (citing Robbin Marks, Natural Res. Defense Council and Clean Water Network, Cesspools of Shame: How Factory Farms Lagoons and Sprayfields Threaten Environmental and Public Health at 3 (July 2001)).

92. Effluent Limitation Guidelines I, *supra* note 14, at 7237 (These findings are based on reports from scientific and technical literature).

93. Environmental Brief, *supra* note 3, at 11 (citing *Proposed Rule Environmental Assessment*, at 3-1).

94. *Id.*

95. Effluent Limitation Guidelines I, *supra* note 14, at 7181. See also Environmental Brief, *supra* note 3, at 11 (citing *Proposed Rule Environmental Assessment*, at 3-1) (discussing the overflow of approximately 25 million gallons of manure from a single hog farm in 1995).

96. Webster's Universal College Dictionary 879 (1997).

97. Effluent Limitation Guidelines I, *supra* note 14, at 7237 (explaining other ways that the pollutants can reach the air and water is by the wind blowing dust particles, and by the manure be sprayed though irrigation systems, once in the air they can be distributed into streams, rivers, and lakes).

98. *Id.* at 7236.